

=> fil reg

FILE 'REGISTRY' ENTERED AT 14:51:04 ON 01 NOV 2005

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STRUCTURE FILE UPDATES: 31 OCT 2005 HIGHEST RN 866452-21-3

DICTIONARY FILE UPDATES: 31 OCT 2005 HIGHEST RN 866452-21-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 14:51:07 ON 01 NOV 2005

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FILE COVERS 1907 - 1 Nov 2005 VOL 143 ISS 19

MEI HUANG EIC1700 REM4B28 571-272-3952

FILE LAST UPDATED: 31 Oct 2005 (20051031/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his

(FILE 'HOME' ENTERED AT 14:12:59 ON 01 NOV 2005)

FILE 'HCAPLUS' ENTERED AT 14:13:09 ON 01 NOV 2005

E US20040033910/PN

L1 1 S E3  
SEL RN L1

FILE 'REGISTRY' ENTERED AT 14:14:04 ON 01 NOV 2005

L2 8 S E1-8

FILE 'HCAPLUS' ENTERED AT 14:16:12 ON 01 NOV 2005

L3 1 S L1 AND L2

FILE 'REGISTRY' ENTERED AT 14:23:16 ON 01 NOV 2005

L4 1 S 653603-12-4/RN

L5 STR 653603-12-4

L6 0 S L5

L7 STR L5

L8 1 S L7

L9 STR L7

L10 2 S L9

L11 19 S L9 FUL

SAV L11 COSTALES097/A

FILE 'HCAPLUS' ENTERED AT 14:45:49 ON 01 NOV 2005

L12 5 S L11

FILE 'STNGUIDE' ENTERED AT 14:48:03 ON 01 NOV 2005

FILE 'HCAPLUS' ENTERED AT 14:48:44 ON 01 NOV 2005

L13 1 S L1 AND L12

FILE 'STNGUIDE' ENTERED AT 14:48:59 ON 01 NOV 2005

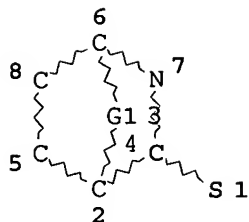
SET COST OFF

FILE 'REGISTRY' ENTERED AT 14:51:04 ON 01 NOV 2005

FILE 'HCAPLUS' ENTERED AT 14:51:07 ON 01 NOV 2005

=> d l12 que stat

L9 STR



VAR G1=O/S/N/C  
 NODE ATTRIBUTES:  
 CONNECT IS E1 RC AT 1  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE  
 L11 19 SEA FILE=REGISTRY SSS FUL L9  
 L12 5 SEA FILE=HCAPLUS L11

=> d l12 bib abs hitstr ind 1-  
 YOU HAVE REQUESTED DATA FROM 5 ANSWERS - CONTINUE? Y/(N):y

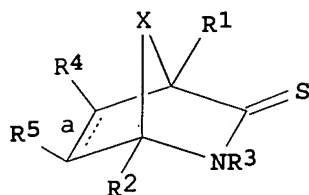
L12 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:142784 HCAPLUS  
 DN 140:202191  
 TI Bicyclic thioamides as ashless, phosphorus-free and metal-free  
 lubricating oil additives  
 IN Mukkamala, Ravindranath  
 PA USA  
 SO U.S. Pat. Appl. Publ., 5 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

*Applicant*

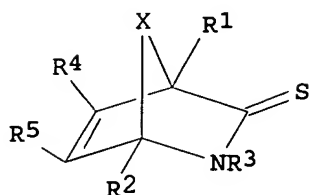
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004033910	A1	20040219	US 2003-636097	20030807
EP 1394240	A1	20040303	EP 2003-254694	20030728
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004162029	A2	20040610	JP 2003-287841	20030806

PRAI US 2002-401541P  
OS MARPAT 140:202191  
GI

P 20020807



I



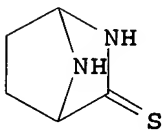
II

AB Non-metallic, phosphorus-free lubrication oil additives are of general structure I, in which X = -O-, -S-, -NR6-, or -CR7R8-; R1, R2, R4, R5, R7, and R8 are H, alkyl, alkenyl, aryl, or aralkyl, and R3 and R6 are H, alkyl, alkenyl, aryl, aralkyl, alkanoyl, or aroyl. R3 is preferably C6-22-alkyl or -alkenyl, aryl, or aralkyl. Other addnl. compds. are of structure II (prepd. from I), in which R6 is B3, H, alkyl, alkenyl, aryl, aralkyl, alkanoyl, or aroyl; B1-3 are -CHR12-CHR13-CO2R14, -CR10R11-NHR9, -C(:O)NHR15, -C(:S)NHR15, or R16; R10, R11, and R14 are H, alkyl, alkenyl, aryl, or aralkyl; R16 is H or C1-4-alkyl; R9 and R15 are alkyl, alkenyl, aryl, or aralkyl. The additives, present at 0.1-20 wt.% in a lubricating oil, are substitutes for conventional zinc dialkyldithiophosphates.

IT 653603-12-4D, 2,7-Diazabicyclo[2.2.1]heptane-3-thione, derivs. 653603-13-5D, derivs. 653603-14-6D, derivs. 653603-15-7D, 2-Azabicyclo[2.2.1]heptane-3-thione, derivs. 653603-16-8D, derivs. 653603-17-9D, derivs. 653603-18-0D, derivs. 653603-19-1D, 2-Azabicyclo[2.2.1]hept-5-ene-3-thione, derivs.  
RL: MOA (Modifier or additive use); USES (Uses)  
(additives; bicyclic thioamides as ashless, phosphorus-free and metal-free lubricating oil additives)

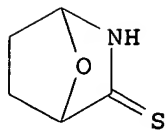
RN 653603-12-4 HCAPLUS

CN 2,7-Diazabicyclo[2.2.1]heptane-3-thione (9CI) (CA INDEX NAME)

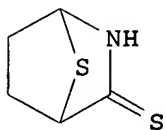


RN 653603-13-5 HCAPLUS

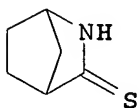
CN 7-Oxa-2-azabicyclo[2.2.1]heptane-3-thione (9CI) (CA INDEX NAME)



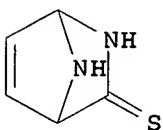
RN 653603-14-6 HCAPLUS  
CN 7-Thia-2-azabicyclo[2.2.1]heptane-3-thione (9CI) (CA INDEX NAME)



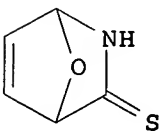
RN 653603-15-7 HCAPLUS  
CN 2-Azabicyclo[2.2.1]heptane-3-thione (9CI) (CA INDEX NAME)



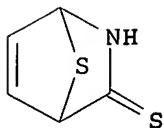
RN 653603-16-8 HCAPLUS  
CN 2,7-Diazabicyclo[2.2.1]hept-5-ene-3-thione (9CI) (CA INDEX NAME)



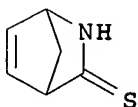
RN 653603-17-9 HCAPLUS  
CN 7-Oxa-2-azabicyclo[2.2.1]hept-5-ene-3-thione (9CI) (CA INDEX NAME)



RN 653603-18-0 HCAPLUS  
CN 7-Thia-2-azabicyclo[2.2.1]hept-5-ene-3-thione (9CI) (CA INDEX NAME)



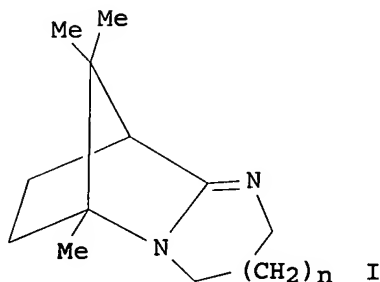
RN 653603-19-1 HCAPLUS  
 CN 2-Azabicyclo[2.2.1]hept-5-ene-3-thione (9CI) (CA INDEX NAME)



IC ICM C10M135-32  
 INCL 508221000; 508261000; 508242000; 546112000; 546114000; 546116000  
 CC 51-8 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 24, 28  
 ST bicyclic thioamide lubricating oil additive; antiwear ashless  
 lubricating oil additive bicyclic thioamide; zinc dithiophosphate  
 substitute bicyclic thioamide lubricant additive  
 IT Lubricating oil additives  
 (antiwear; bicyclic thioamides as ashless, phosphorus-free and  
 metal-free lubricating oil additives)  
 IT Heterocyclic compounds  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (bicyclic, nitrogen, additives; bicyclic thioamides as ashless,  
 phosphorus-free and metal-free lubricating oil additives)  
 IT Heterocyclic compounds  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (bicyclic, oxygen, additives; bicyclic thioamides as ashless,  
 phosphorus-free and metal-free lubricating oil additives)  
 IT Heterocyclic compounds  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (bicyclic, sulfur, additives; bicyclic thioamides as ashless,  
 phosphorus-free and metal-free lubricating oil additives)  
 IT Thioamides  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (bicyclic; bicyclic thioamides as ashless, phosphorus-free and  
 metal-free lubricating oil additives)  
 IT Bicyclic compounds  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heterocyclic, nitrogen, additives; bicyclic thioamides as  
 ashless, phosphorus-free and metal-free lubricating oil  
 additives)  
 IT Bicyclic compounds  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heterocyclic, oxygen, additives; bicyclic thioamides as ashless,  
 phosphorus-free and metal-free lubricating oil additives)  
 IT Bicyclic compounds  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heterocyclic, sulfur, additives; bicyclic thioamides as ashless,

phosphorus-free and metal-free lubricating oil additives)  
IT Lubricating oil additives  
(multifunctional; bicyclic thioamides as ashless, phosphorus-free  
and metal-free lubricating oil additives)  
IT 653603-12-4D, 2,7-Diazabicyclo[2.2.1]heptane-3-thione,  
derivs. 653603-13-5D, derivs. 653603-14-6D,  
derivs. 653603-15-7D, 2-Azabicyclo[2.2.1]heptane-3-thione,  
derivs. 653603-16-8D, derivs. 653603-17-9D,  
derivs. 653603-18-0D, derivs. 653603-19-1D,  
2-Azabicyclo[2.2.1]hept-5-ene-3-thione, derivs.  
RL: MOA (Modifier or additive use); USES (Uses)  
(additives; bicyclic thioamides as ashless, phosphorus-free and  
metal-free lubricating oil additives)

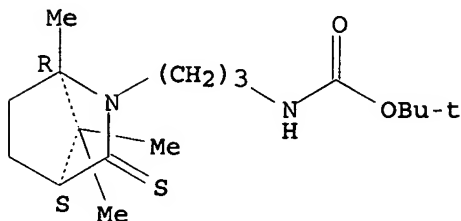
L12 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2000:799014 HCAPLUS  
DN 134:115933  
TI A novel synthesis of chiral DBU/DBN-related molecules for use in  
asymmetric base catalysis  
AU Kotsuki, Hiyoshizo; Sugino, Atsushi; Sakai, Hiromitsu; Yasuoka,  
Hiroko  
CS Laboratory of Natural Products Synthesis, Faculty of Science, Kochi  
University, Kochi, 780-8520, Japan  
SO Heterocycles (2000), 53(11), 2561-2567  
CODEN: HCYAM; ISSN: 0385-5414  
PB Japan Institute of Heterocyclic Chemistry  
DT Journal  
LA English  
OS CASREACT 134:115933  
GI



AB The sterically hindered chiral DBU/DBN-related mols. I [n = 1, 2]  
were prepd. from (+)-camphor lactam. The value of I as chiral org.  
base catalysts is exemplified by their use in asym. Michael addn.  
reactions of Me 1-oxo-2-indancarboxylate with MeCOCH:CH<sub>2</sub>.  
IT 320573-80-6P 320573-81-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(prepn. of chiral diazatricycloalkenes as catalysts for asym.  
Michael addns.)  
RN 320573-80-6 HCAPLUS  
CN Carbamic acid, [3-[(1R,4S)-1,7,7-trimethyl-3-thioxo-2-

azabicyclo[2.2.1]hept-2-yl]propyl]-, 1,1-dimethylethyl ester (9CI)  
(CA INDEX NAME)

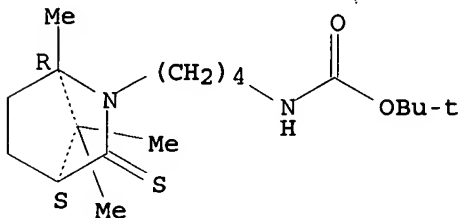
Absolute stereochemistry.



RN 320573-81-7 HCAPLUS

CN Carbamic acid, [4-[(1R,4S)-1,7,7-trimethyl-3-thioxo-2-azabicyclo[2.2.1]hept-2-yl]butyl]-, 1,1-dimethylethyl ester (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.



CC 28-21 (Heterocyclic Compounds (More Than One Hetero Atom))  
ST diazatricycloalkene prepn chiral catalyst stereoselective Michael addn  
IT Michael reaction  
Michael reaction catalysts  
(stereoselective; prepn. of chiral diazatricycloalkenes as catalysts for asym. Michael addns.)  
IT 320573-82-8P 320573-83-9P  
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(prepn. of chiral diazatricycloalkenes as catalysts for asym. Michael addns.)  
IT 78-94-4, Methyl vinyl ketone, reactions 2162-33-6 22955-77-7  
24326-89-4 51326-51-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of chiral diazatricycloalkenes as catalysts for asym. Michael addns.)  
IT 105064-28-6P 320573-75-9P 320573-76-0P 320573-77-1P  
320573-78-2P 320573-79-3P 320573-80-6P  
320573-81-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of chiral diazatricycloalkenes as catalysts for asym. Michael addns.)



IT 66152-63-4P 79298-08-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of chiral diazatricycloalkenes as catalysts for asym.  
 Michael addns.)

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:570954 HCAPLUS

DN 131:286165

TI Conformational properties and chiroptical spectra of lactams and  
 thiolactams with 2-azabicyclo[2.2.1]heptane, 2- and  
 3-azabicyclo[3.2.1]octane skeletons

AU Polonski, Tadeusz; Milewska, Maria J.; Konitz, Antoni; Gdaniec,  
 Maria

CS Department of Chemistry, Technical University, Gdansk, 80-952, Pol.

SO Tetrahedron: Asymmetry (1999), 10(13), 2591-2604

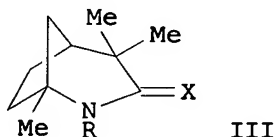
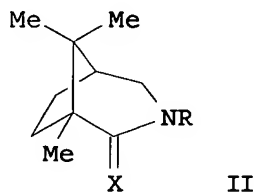
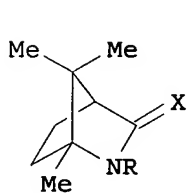
CODEN: TASYE3; ISSN: 0957-4166

PB Elsevier Science Ltd.

DT Journal

LA English

GI



AB The CD spectra of several bicyclic lactams and thiolactams were measured in different solvents. The concn. dependence of the spectra obsd. in hydrocarbon solvents was attributed to shifts in the equil. between monomer and hydrogen-bonded dimer forms. The CD of some compds. is characterized by unusually strong Cotton effects resulting from non-planarity of the amide bonds due to internal strain of the bicyclic skeletons. The X-ray crystallog. structures of I(R,X given: H,O;H,S), II(R,X given: Me,O;Me,S) and III(R,X given: H,O;Me,O) showed different degrees of distortion of the amide or thioamide moieties from planarity, which causes inherent chirality of the chromophores and profoundly affects the Cotton effect sign and magnitude. This distortion also restricts application of the sector rules for prediction of the  $n-\pi^*$  CD

sign, since they can be used only for compds. with planar chromophores.

IT 246044-07-5P 246044-09-7P 246044-11-1P  
246044-12-2P

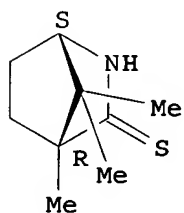
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(conformational properties and chiroptical spectra of lactams and thiolactams with 2-azabicyclo[2.2.1]heptane, 2- and 3-azabicyclo[3.2.1]octane skeletons)

RN 246044-07-5 HCAPLUS

CN 2-Azabicyclo[2.2.1]heptane-3-thione, 4,7,7-trimethyl-, (1S,4R)-  
(9CI) (CA INDEX NAME)

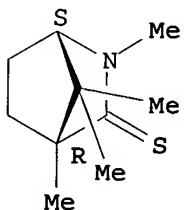
Absolute stereochemistry. Rotation (-).



RN 246044-09-7 HCAPLUS

CN 2-Azabicyclo[2.2.1]heptane-3-thione, 2,4,7,7-tetramethyl-, (1S,4R)-  
(9CI) (CA INDEX NAME)

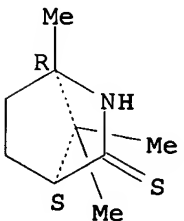
Absolute stereochemistry. Rotation (-).



RN 246044-11-1 HCAPLUS

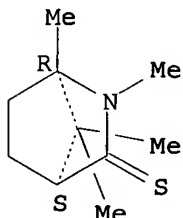
CN 2-Azabicyclo[2.2.1]heptane-3-thione, 1,7,7-trimethyl-, (1R,4S)-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 246044-12-2 HCAPLUS  
 CN 2-Azabicyclo[2.2.1]heptane-3-thione, 1,2,7,7-tetramethyl-, (1R,4S)-  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



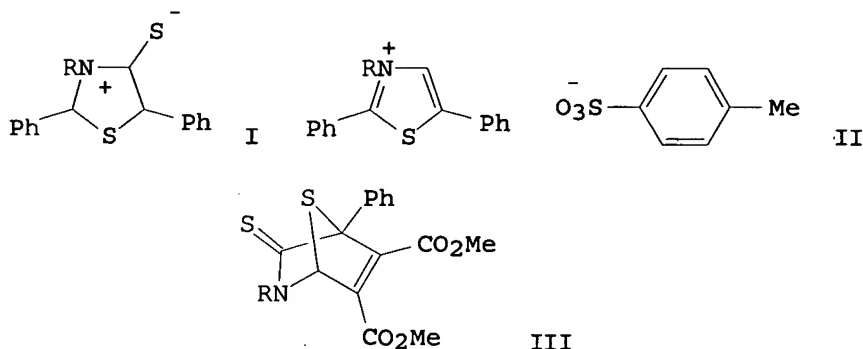
CC 22-11 (Physical Organic Chemistry)  
 Section cross-reference(s): 75  
 ST CD spectra bicyclic lactam thiolactam; crystallog bicyclic lactam  
 thiolactam; conformation bicyclic lactam thiolactam  
 IT Circular dichroism  
 Conformation  
 Cotton effect  
 Crystal structure  
 Molecular structure  
 Strain energy  
 UV and visible spectra  
 (conformational properties and chiroptical spectra of lactams and  
 thiolactams with 2-azabicyclo[2.2.1]heptane, 2- and  
 3-azabicyclo[3.2.1]octane skeletons)  
 IT Bicyclic compounds  
 Lactams  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (conformational properties and chiroptical spectra of lactams and  
 thiolactams with 2-azabicyclo[2.2.1]heptane, 2- and  
 3-azabicyclo[3.2.1]octane skeletons)  
 IT Dimers  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (hydrogen-bonded; conformational properties and chiroptical  
 spectra of lactams and thiolactams with 2-  
 azabicyclo[2.2.1]heptane, 2- and 3-azabicyclo[3.2.1]octane  
 skeletons)  
 IT Lactams  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (thio-; conformational properties and chiroptical spectra of  
 lactams and thiolactams with 2-azabicyclo[2.2.1]heptane, 2- and  
 3-azabicyclo[3.2.1]octane skeletons)  
 IT 24326-88-3P 24326-89-4P 107073-56-3P 107073-62-1P  
 107133-28-8P 246044-06-4P 246044-07-5P  
 246044-09-7P 246044-10-0P 246044-11-1P  
 246044-12-2P 246044-17-7P 246044-18-8P 246044-19-9P  
 246044-20-2P 246044-21-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

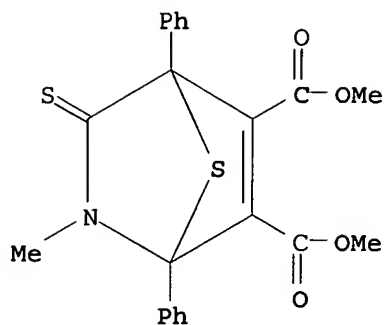
(conformational properties and chiroptical spectra of lactams and thiolactams with 2-azabicyclo[2.2.1]heptane, 2- and 3-azabicyclo[3.2.1]octane skeletons)

RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1985:184997 HCAPLUS  
DN 102:184997  
TI Studies on mesoionic compounds. XIV. Synthesis of mesoionic 1,3-thiazolium-4-thiolates  
AU Takezawa, Katsushi; Nomura, Keiichi; Yoshii, Eiichi; Masuda, Katsutada  
CS Fac. Pharm. Sci., Toyama Med. Pharm. Univ., Toyama, 930, Japan  
SO Chemical & Pharmaceutical Bulletin (1984), 32(11), 4637-40  
CODEN: CPBTAL; ISSN: 0009-2363  
DT Journal  
LA English  
OS CASREACT 102:184997  
GI

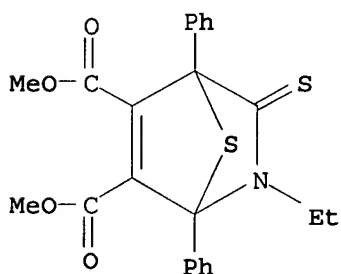


AB 3-Alkyl-2,5-diphenyl-1,3-thiazolium-4-thiolate I (R = Me, Et, CH<sub>2</sub>Ph) were prepd. by exchange of the exocyclic O of the mesoionic 4-olate with S via O-methylation or by base-catalyzed thiation of the N-alkyl-1,3-thiazolium compd II. I underwent cycloaddn. with MeO<sub>2</sub>CC.tplbond.CCO<sub>2</sub>Me to give thermally stable bicyclic compds. III.  
IT 96207-20-4P 96207-21-5P 96207-22-6P  
RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
RN 96207-20-4 HCAPLUS  
CN 7-Thia-2-azabicyclo[2.2.1]hept-5-ene-5,6-dicarboxylic acid, 2-methyl-1,4-diphenyl-3-thioxo-, dimethyl ester (9CI) (CA INDEX NAME)



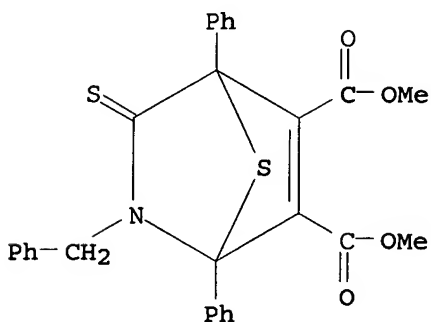
RN 96207-21-5 HCAPLUS

CN 7-Thia-2-azabicyclo[2.2.1]hept-5-ene-5,6-dicarboxylic acid,  
2-ethyl-1,4-diphenyl-3-thioxo-, dimethyl ester (9CI) (CA INDEX  
NAME)



RN 96207-22-6 HCAPLUS

CN 7-Thia-2-azabicyclo[2.2.1]hept-5-ene-5,6-dicarboxylic acid,  
1,4-diphenyl-2-(phenylmethyl)-3-thioxo-, dimethyl ester (9CI) (CA  
INDEX NAME)



CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))  
ST thiazoliumthiolate prepn cycloaddn acetylenedicarboxylate;  
thiaazabicycloheptenethone; mesoionic thiazoliumthiolate  
IT Meso-ionic compounds  
RL: SPN (Synthetic preparation); PREP (Preparation)

(thiazolium thiolates, prepn. and cycloaddn. of, with acetylenedicarboxylate)

IT 96207-11-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(prepn. and methylation of)

IT 96207-17-9P 96207-18-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(prepn. and reaction of, with acetylenedicarboxylate)

IT 56922-47-5P 96207-16-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(prepn. and reaction of, with sulfur)

IT 96207-12-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(prepn. and reaction of, with trimethyloxonium tetrafluoroborate)

IT 96207-14-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(prepn. and thiolation of)

IT 96207-19-1P 96207-20-4P 96207-21-5P  
96207-22-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

IT 80-48-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with 2,5-diphenylthiazole)

IT 3704-40-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with alkyl p-toluenesulfonates)

IT 762-42-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with alkyl diphenylthiazolium thiolates)

IT 5310-14-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with bromophenylacetic acid)

IT 80-40-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with diphenylthiazole)

IT 4870-65-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with methylthiobenzamide)

L12 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1966:420707 HCAPLUS

DN 65:20707

OREF 65:3826e-f

TI Diels-Alder synthesis with acetyl and benzoyl isothiocyanates

AU Arbuzov, B. A.; Zobova, N. N.

CS State Univ., Kazan

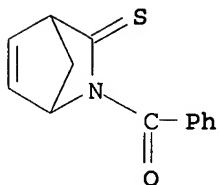
SO Doklady Akademii Nauk SSSR (1966), 167(4), 815-18

CODEN: DANKAS; ISSN: 0002-3264

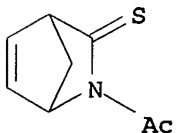
DT Journal

LA Russian

- AB Keeping benzoyl isothiocyanate with 1 mole butadiene in a sealed tube 6-7 months gave after treatment with dry Et<sub>2</sub>O 45.3% N-benzoyl-2-thiono-1,2,3,6-tetrahydropyridine, m. 97-8°; acetyl isothiocyanate gave the N-acetyl analog, 40.7%, m. 78-80°. Reaction with isoprene performed in the presence of hydroquinone gave, resp., 44.5% 4(or 5)-methyl-N-benzoyl-2-thiono-1,2,3,6-tetrahydropyridine, m. 99-101°, and 39.2% 4(or 5)-methyl-N-acetyl-2-thiono-1,2,3,6-tetrahydropyridine, m. 82-3°. Similar reaction with 2,3-dimethyl-1,3-butadiene gave 46% 4,5-dimethyl-N-benzoyl-2-thiono-1,2,3,6-tetrahydropyridine, m. 146°, and 42.5% 4,5-dimethyl-N-acetyl-2-thiono-1,2,3,6-tetrahydropyridine, m. 93.5-5°. Cyclopentadiene gave 50.6% N-benzoyl-3-thiono-2-azabicyclo[2.2.1]-5-heptene, m. 125.5-26°, and 49.8% N-acetyl analog, m. 91-2°. Ir spectra are reported.
- IT 6431-29-4, 2-Azabicyclo[2.2.1]hept-5-ene-3-thione, 2-benzoyl- 6431-30-7, 2-Azabicyclo[2.2.1]hept-5-ene-3-thione, 2-acetyl- (prepn. and spectrum of)
- RN 6431-29-4 HCAPLUS
- CN 2-Azabicyclo[2.2.1]hept-5-ene-3-thione, 2-benzoyl- (7CI, 8CI) (CA INDEX NAME)



- RN 6431-30-7 HCAPLUS
- CN 2-Azabicyclo[2.2.1]hept-5-ene-3-thione, 2-acetyl- (7CI, 8CI) (CA INDEX NAME)



- CC 37 (Heterocyclic Compounds (One Hetero Atom))
- IT Spectra, infrared (of Diels-Alder adducts with acetyl and benzoyl isothiocyanates)
- IT Diels-Alder reaction (of acetic acid anhydride with isothiocyanic acid or benzoic acid anhydride with isothiocyanic acid)
- IT Acetic acid, anhydride with isothiocyanic acid (Diels-Alder reaction with)
- IT 532-55-8, Benzoic acid, anhydride with isothiocyanic acid (Diels-Alder reaction with)
- IT 6431-24-9, 2(1H)-Pyridinethione, 1-benzoyl-3,6-dihydro- 6431-25-0,

2(1H)-Pyridinethione, 1-acetyl-3,6-dihydro- 6431-26-1,  
2(1H)-Pyridinethione, 1-benzoyl-3,6-dihydro-4-methyl-(?)  
6431-27-2, 2(1H)-Pyridinethione, 1-benzoyl-3,6-dihydro-4,5-dimethyl-  
6431-28-3, 2(1H)-Pyridinethione, 1-acetyl-3,6-dihydro-4,5-dimethyl-  
6431-29-4, 2-Azabicyclo[2.2.1]hept-5-ene-3-thione,  
2-benzoyl- 6431-30-7, 2-Azabicyclo[2.2.1]hept-5-ene-3-  
thione, 2-acetyl- 6545-84-2, 2(1H)-Pyridinethione,  
1-acetyl-3,6-dihydro-4-methyl-(?) 13250-44-7, 2(1H)-  
Pyridinethione, 1-benzoyl-3,6-dihydro-5-methyl-(?) 13250-45-8,  
2(1H)-Pyridinethione, 1-acetyl-3,6-dihydro-5-methyl-(?)  
(prepn. and spectrum of)

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